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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,466	06/23/2005	Ralf Norenberg	12810-00099-US	2974
23416 7590 11/28/2008 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899				
EXAMINER				
FREEMAN, JOHN D				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
11/28/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/540,466

**Applicant(s)**

NORENBERG ET AL.

**Examiner**

John Freeman

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30,31 and 34-53 is/are pending in the application.
- 4a) Of the above claim(s) 44-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30,31 and 34-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date 6/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 30-43, in the reply filed on 14 August 2008 is acknowledged. The traversal is on the ground(s) that the inventions are not independent. This is not found persuasive because the inventions lack unity, as set forth in MPEP 1850 II, since the inventions lack a corresponding special technical features as noted in the original restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 44-53 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 14 August 2008.

### ***Claim Objections***

3. Claim 31 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 31 still recites X<sup>1</sup> can be -COOH, a nonelected species that Applicant has deleted from claim 30.

4. Claims 30 and 31 are objected to because of the following informalities:

- The examiner notes claim 30 recites X<sup>1</sup> can be -CR<sup>3</sup>(NH<sub>2</sub>)(COOH), a nonelected species; however, other nonelected species have been deleted.
- Claim 30 recites "Z is an endgroup, being *either*", but lists only one option, (a).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 30, 34, 37-40, and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Karydas et al. (US 4,767,545).

7. Karydas et al. (hereafter Karydas) disclose an organic compound with the following formula (I):



- $R_f$  comprises a fluoroaliphatic group (col 5 ln 21);
- $n$  is 1 (col 5 ln 24);
- $R'$  comprises a divalent group such as  $-R_1-C_1-C_8$  alkylene- $R_1'$ — (col 5 ln 58);
- $m$  is 1 (col 5 ln 28); and
- $Z$  comprises an alkoxy group of up to 20 carbon atoms (col 7 ln 21-54).

8.  $R_1$  is a phosphonate group according to the following (col 6 ln 11-15):



wherein  $R_2$  is a hydrogen (col 6 ln 17).

9. The  $C_1-C_8$  alkylene can be substituted with a carboxy group (col 5 ln 64-68), which means the alkylene can have a  $-(CH_2)_xCO-$  structure, where  $x$  ranges from 1-7.

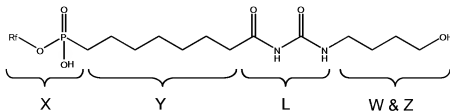
10.  $R_1'$  is an amide according to the following (col 6 ln 7):



wherein  $R_2$  is a hydrogen or alkyl group (col 6 ln 17).

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11. Therefore Karydas discloses a compound having the following exemplary structure:



12. Regarding claim 42:

13. The examiner notes the present claim provides no structure for an adhesion promoter, primer, passivator, or conversion coat former, other than the existence of the compound according to X-Y-L-W-Z. There is no disclosure in Karydas that the organic compound is for an adhesion promoter, primer, passivator, or conversion coat former. However, the preamble of the claim is merely an intended use. Applicants attention is drawn to MPEP 2111.02 which states that intended use statements must be evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

14. It is the examiner's position that the intended use recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art and further that the prior art structure is capable of performing the intended use. Given that Karydas discloses an organic compound as presently claimed, it is clear that the compound of Karydas would be capable of performing the intended use, i.e. an adhesion promoter, primer, passivator, or conversion coat former, presently claimed as required in the above cited portion of the MPEP.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karydas et al. (US 4,767,545).

17. Karydas discloses a compound conforming to Applicant's formula X-Y-L-W-Z as explained previously. The portion of Karydas's compound corresponding to Applicant's Y is a C<sub>1</sub>-C<sub>8</sub> alkylene group.

18. Karydas is silent with regard to an alkyl group comprising greater than 8 carbon atoms.

19. However, a C<sub>8</sub> alkylene group and a C<sub>9</sub> alkylene group are homologs—compounds differing regularly by the successive addition of the same chemical groups, in the present instance, methylene units. The courts have held, as found in *In re Wilder*, 563 F.2d 457, 195 USPQ 426 (CCPA 1977), that compounds which are homologs "are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties".

20. In light of the case law cited above, it therefore would have been obvious to one of ordinary skill in the art that the C<sub>9</sub> alkylene group disclosed in the present claims is but an obvious variant of the C<sub>8</sub> alkylene group disclosed in Karydas, and thereby one of ordinary skill in the art would have arrived at the claimed invention.

***Claim Rejections - 35 USC § 112***

21. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

22. Claims 30-31, 34-43 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A linearly linking group L defined solely as L<sup>1</sup>, L<sup>2</sup>, or L<sup>3</sup> is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). In the specification, e.g. p3 ln 3-14 and p5 ln 15-35, L is defined as one of L<sup>1</sup>, L<sup>2</sup>, or L<sup>3</sup>, not as an amide bonded to L<sup>1</sup>, -CO-NR<sup>1</sup>-(L<sup>1</sup>), as presently claimed. None of the identities of L<sup>1</sup>, L<sup>2</sup>, or L<sup>3</sup> allow for a group having the structure of an amide bonded to L<sup>1</sup>. Therefore, a compound of X-Y-L-W-Z, wherein L is solely L<sup>1</sup>, L<sup>2</sup>, or L<sup>3</sup> would appear critical to the use of the invention as Applicant describes. The examiner examines the claims as presently written for this Office Action.

23. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

24. Claim 30 recites the limitations X "is able to develop strong chemical and/or physical interactions toward metal surfaces". It is unclear what is meant or encompassed by this limitation. The adjective "strong" is entirely relative, and "interactions" could describe attractive or repulsive forces.
25. Claim 30 recites the limitation R<sup>2</sup> is an alkyl group "with or without further substituents". It is unclear what functional groups are encompassed by this limitation. The group may be an alkyl group as disclosed with other functional groups attached thereto, or an alkyl group as disclosed that contains functional groups therein.
26. Claim 30 recites the limitation the units of Y "are linked linearly" and "are of substantially identical kind". It is unclear what is meant by "linked linearly," particularly since dependent claim 34 allows for

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branched hydrocarbon groups. It is unclear how close to identical the units must be for them to fall under the scope of "substantially identical kind."

27. Claim 30 recites " $L^1$ ...joins a hydrophobic group Y to a hydrophilic group W". It is unclear how  $L^1$  joins these two groups, as an amide group ( $-\text{CO}-\text{NR}^1-$ ) is interposed between Y and  $L^1$ . Furthermore, the existence of the amide group is unclear, as noted in the rejections under 112, first paragraph above.

28. Claim 30 recites the limitations Z is a "nonreactive endgroup  $Z^2$ ," wherein  $Z^2$  includes groups such as ethers, amines, esters, and amides. It is unclear what is encompassed by the term "nonreactive" since the exemplary groups are reactive under a number of conditions.

29. Claim 34 recites the units of Y "are linked linearly" yet provides for a branched hydrocarbon group. It is unclear what is meant by "linked linearly."

30. Claim 39 recites the limitation "the units" in line 1. There is insufficient antecedent basis for this limitation in the claim. The claim appears to limit the number of alkoxyate units, however, other units exist in claim 30, e.g. units of Y.

31. Claim 41 is directed toward a "compound according to claim 30, which further comprises a corrosion inhibitor." The scope of the claim is indefinite. Claim 30 merely discloses a chemical compound, not a composition comprising said compound. Therefore, it is unclear how the chemical compound can "further comprise a corrosion inhibitor."

32. Claim 42 recites "conversion coat former." It is unclear what is meant and encompassed by this term.

33. Claim 43 provides for the use of the compound disclosed in claim 30, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

### ***Conclusion***

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The examiner notes the X reference cited by the International Search Authority, US '706, does not



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disclose a compound corresponding to Applicant's formula X-Y-L-W-Z. Cooke '791 and Karydas '160 disclose perfluoralkyl-containing compounds similar to those disclosed by Karydas '545. Wetterer '990 discloses compounds for coating a metallic surface. Couturier '967 discloses compounds similar to that being presently claimed. Mao '028 discloses surface coating compositions. Sundar '870 discloses compounds similar to that being presently claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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